

ca 1330197

(VD)

CAMERA CALIBRATION CERTIFICATE

CAMERA TYPE : RC30
LENS TYPE : 15/4 UAG-S
LENS NO. : 13301

Calibration date: 10.11.1997

SwissOptic AG, Heerbrugg

 **swissoptic**
SwissOptic AG
Heinrich-Wild-Strasse
CH-8435 Heerbrugg
Schweiz



22.10.98 E. G.

RC30

15/4 UAG-S

No. 13301

10.11.1997

Aperture: 4.0
 Filter on goniometer: VIS (400 - 700 NM)
 Filter on camera: -
 C.F.L. : 153.503 mm

Radial distortion (micrometers) referred to principal point of symmetry (PPS)
 (Positive values denote image displacement away from center)

Radius mm	Half - Sides				Mean
	1	3	2	4	
10	-0.5	-1.0	-0.8	-0.8	-0.7
20	-1.0	-2.0	-1.4	-1.5	-1.4
30	-1.5	-2.4	-1.6	-2.0	-1.8
40	-1.2	-2.0	-1.9	-1.7	-1.7
50	-0.7	-2.0	-1.9	-1.2	-1.4
60	-0.6	-1.8	-1.3	-0.9	-1.1
70	0.6	-1.4	-1.3	-0.3	-0.6
80	0.6	-0.6	-0.9	0.5	-0.1
90	1.9	-0.3	-0.7	0.6	0.3
100	1.7	-0.1	1.1	0.9	0.9
110	1.7	0.3	1.5	1.5	1.2
120	1.6	1.3	0.6	1.3	1.2
130	0.8	1.0	1.6	0.7	1.0
140	-1.3	1.0	0.4	-0.3	0.0
148	-2.6	0.2	-0.4	-0.7	-0.8

Photographic resolution (line pairs per millimeter)

International 3-line test-chart, contrast (log) : 2.0

Aperture: 4.0
 Filter: 450 NM
 Film: KODAK PANATOMIC X 2412
 Developer: KODAK HC110

Angle (deg)	0	5	10	15	20	25	30	35	40	45
Radial:	117	117	115	101	98	119	114	108	90	83
Tangential:	117	116	114	109	103	108	111	111	87	52

AWAR (Area weighted average resolution) in lp/mm: 108

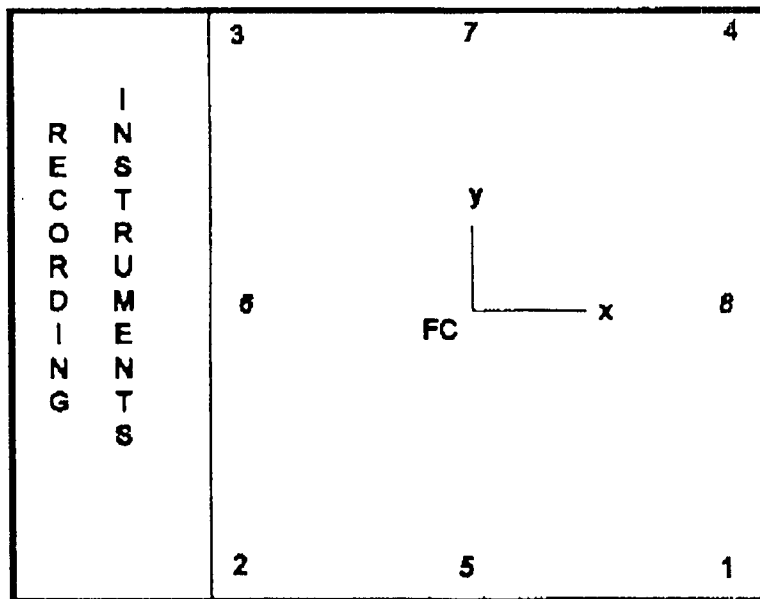


Principal point of autocollimation (PPA) and principal point of symmetry (PPS) referred to central cross (FC), see diagram

	x (mm)	y (mm)
PPA	0.004	0.011
PPS	0.009	0.002

Fiducial marks, referred to central cross (FC)

	x (mm)	y (mm)		x (mm)	y (mm)
1	105.998	-105.995	5	-0.001	-111.992
2	-106.001	-105.999	6	-112.000	0.003
3	-106.002	105.998	7	0.001	111.988
4	106.001	105.999	8	112.002	0.000

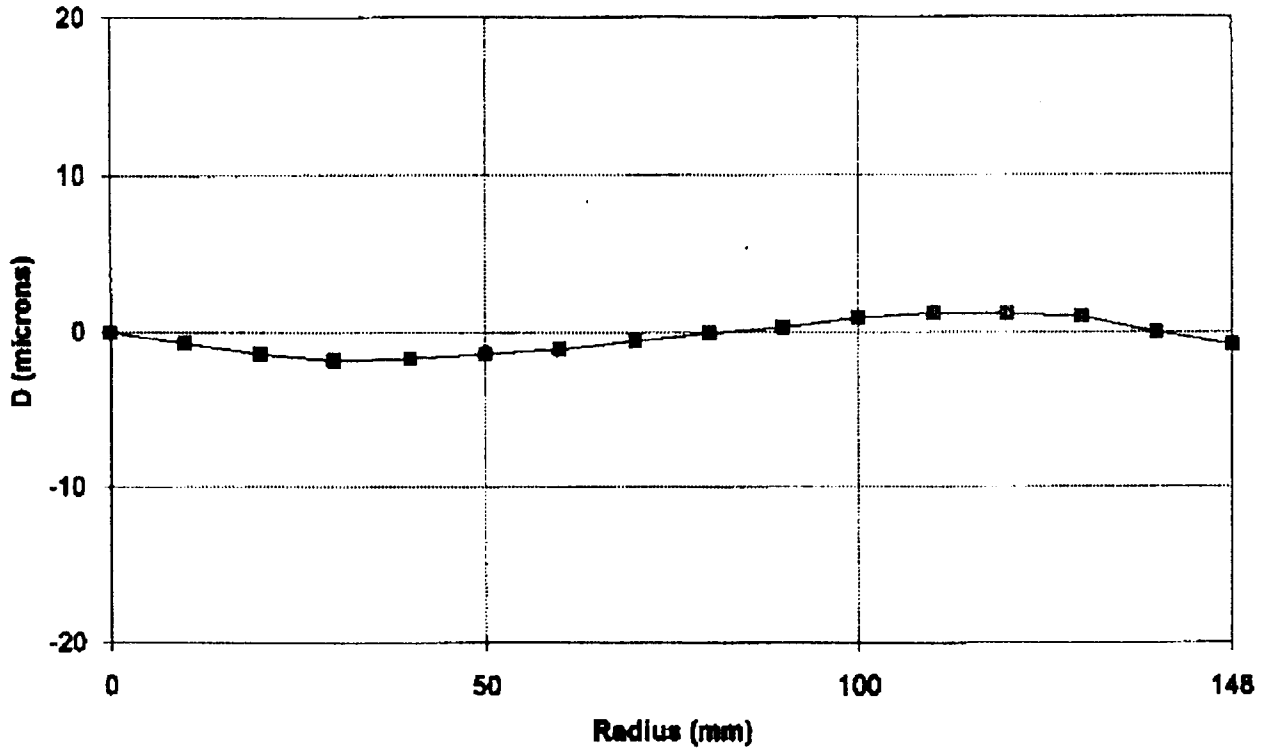


as seen on focal plane frame

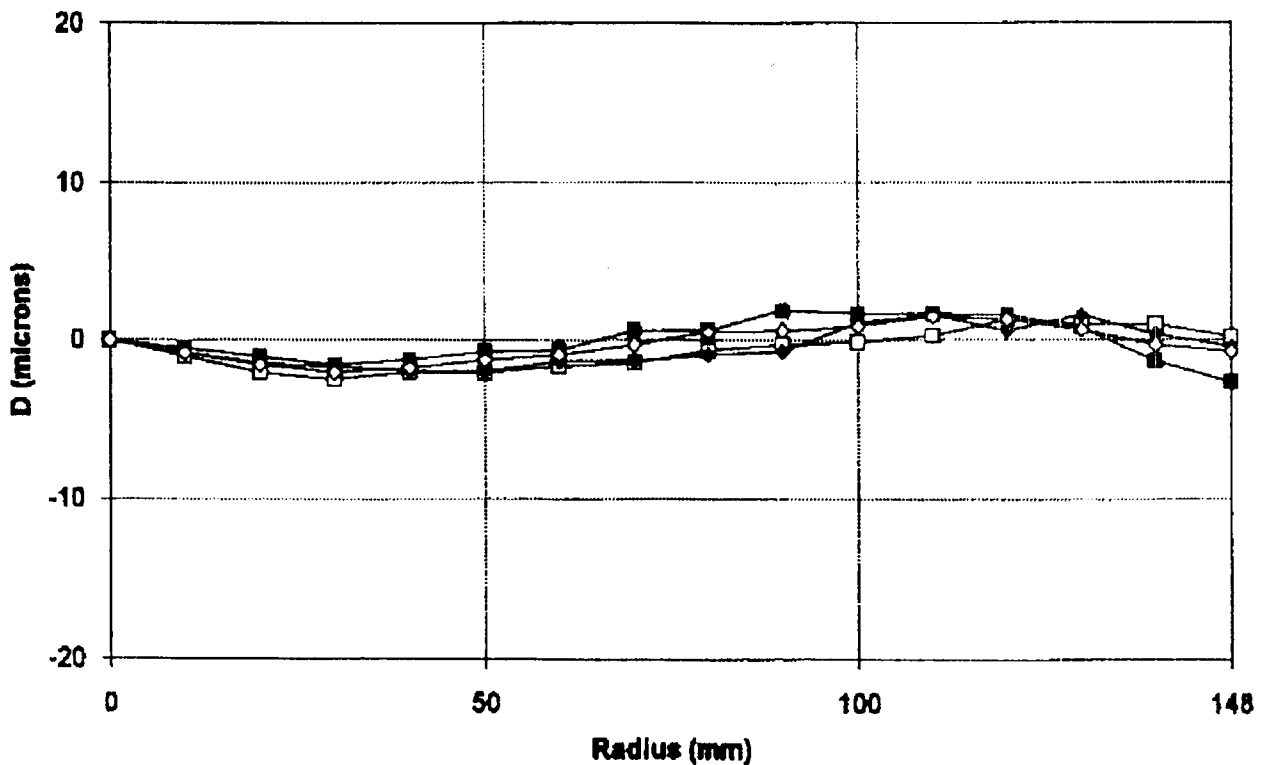
Handwritten signature or mark

Aperture: 4.0
Filter on goniometer: VIS (400 - 700 NM)
Filter on camera: -
C.F.L.: 153.503 mm

Mean radial distortion



Radial distortion for semi-diagonals referred to PPS



—■— 1 —□— 3 —◆— 2 —◇— 4

